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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/936,559	09/24/1997	JING-LU GU	M-5176-US	9875

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EXAMINER

GRIER, LAURA A

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 10/02/2003

20

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/936,559

Applicant(s)

GU, JING-LU

Examiner

Laura A Grier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-9, 11, 12 and 17-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 and 28 is/are allowed.
- 6) ☒ Claim(s) 4-9, 11, 12, 17-27 and 29-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
2. The allowability of claim 22 has been withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yekutiely, U. S. Patent No. 5526408 and further in view of Henderson and Thompson.

Regarding claim 4, Yekutiely discloses a communication system a communication device, which indicates a functional unit, with a speaker, a bi-directional interface for providing analog audio transmission via input/output port (figures 1 and 2, col. 2, lines 59-67 and abstract). However, Yekutiely fails to specifically the speaker coupled to an integrated circuit, wherein the speaker provides both input an output, and an activation circuit. The examiner maintains that such components are well known in the art.

Regarding a speaker coupled to an integrated circuit, in a similar field of endeavor, Henderson discloses a dialer programming system and device with integrated printing process.

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Henderson's disclosure comprises an integrated circuit (digital record/playback circuit, indicative of a functional unit as well) that includes a speaker for sound input and output (col. 15, lines 8-52).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Yekutiely by incorporating a speaker coupled to an integrated circuit having dual function of providing input and output and thus further being coupled the input and output circuits for adequate performance of the processing system.

However, Yekutiely and Henderson fails to specifically disclose, and activation circuit. The examiner maintains that such a circuit was well known in the art.

Regarding the activation circuit, Thompson discloses a sound activation circuit that activates a playback device upon reception and/or detection of one's voice and releases a verbal response in regards to the input signal (abstract and figures 3-5).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention Yekutiely and Henderson by incorporating an activation circuit for the purpose of activates a playback device upon reception and/or detection of one's voice via a speaker and releases a verbal response and/or output in regards to the input.

Regarding claims 7, 18, and 24, Yekutiely and Henderson disclose everything claimed as applied above (see claim 4). Thompson discloses a delay circuit (figure 5). It would have been obvious to one the ordinary skill in the art at the time the invention was made to modify the invention of Yekutiely by implement a time delay circuit for the purpose enabling an activation signal for selected extent of time (col. 4, 1st paragraph).

5. Claim 5-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yekutieli and Henderson, and Thompson (herein, "Yeku et al.") in view Bobry.

Regarding claim 5, Yeku et al. discloses everything claimed as applied above (see claim 4). Yeku et al. discloses a D/A conversion (col. 2, lines 63-66). Henderson et al. discloses a memory as well on the integrated circuit which constitutes a memory array (col. 15, lines 42-43). However, Yeku et al. fails to specifically disclose access circuitry. The examiner maintains that such components were well known in the art.

Regard the access circuitry and a converter as well, in a similar field of endeavor, Bobry discloses a microprocessor 42 (access circuitry) is capable reading stored digital audio from a memory 46 in Fig. 14. Column 14, lines 36-37. The digital signal is then applied to the D/A converter 176. The output of the D/A converter 176 is an analog signal which is then amplified by an amplifier 178 to an appropriate level and applied to the transducer (column 14, lines 35-41).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Yeku et al. by incorporating an access circuitry such a microprocessor and an D/A converter for the purpose of having the capability of retrieving audio data (digital) from a memory means and thus enabling the conversion of a digital signal to an analog signal for adequate form to further the signal drive by an amplifier to the speaker.

Regarding claims 6 and 25, Yeku et al. and Bobry discloses everything claimed as applied above (see claim 5). Bobry discloses everything claimed as applied above (see claim 5). When transducer 170, its signal may be boosted to an appropriate level by the amplifier 172, the

output of which is applied to the A/D converter 174. The A/D converter 174 converts the analog signal into digital form, which can be stored in memory 46 by the microprocessor 42. Column 14, lines 30-35.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Yeku et al. by incorporating A/D converter and amplifier for the purpose enabling the conversion of an analog signal to a digital signal for adequate form to further drive the signal by an amplifier to the speaker.

Regarding claim 8, it is interpreted as a combination of claims 4 and 5, and thus rejected for the same reasons set forth above.

Regarding claims 9 and 26, it is interpreted as a claim 6, and thus rejected for the same reasons set forth above.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yeku et al.

Regarding claim 11, Yeku et al. discloses everything claimed (see claim 4). However, Yuke et al. fails to specifically disclose a three pin package as claimed. However, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Yeku et al. by incorporating a three pin package of the purpose of obvious coupling of one pin connected to the speaker and first terminal of the IC and further connected a pin to a power supply and another to ground, wherein this a common structure or likeness of and IC chip.

7. Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable

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over Yeku et al. in view of the applicant's admitted prior art.

Regarding claim 17 and 19, Yekutiely discloses a communication system a communication device, which indicates a functional unit, with a speaker, a bi-directional interface for providing analog audio transmission via input/output port (figures 1 and 2, col. 2, lines 59-67 and abstract). However, Yekutiely fails to specifically the speaker coupled to an integrated circuit, wherein the speaker provides both input an output, and an activation circuit. The examiner maintains that such components are well known in the art.

Regarding a speaker coupled to an integrated circuit, in a similar field of endeavor, Henderson discloses a dialer programming system and device with integrated printing process. Henderson's disclosure comprises an integrated circuit (digital record/playback circuit, indicative of a functional unit as well) that includes a speaker for sound input and output (col. 15, lines 8-52). As well, Henderson et al. discloses a memory on the integrated circuit which constitutes a memory array (col. 15, lines 42-43).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Yekutiely by incorporating a speaker coupled to an integrated circuit having dual function of providing input and output and thus further being coupled the input and output circuits for adequate performance of the processing system.

However, Yekutiely and Henderson fails to specifically disclose, and activation circuit. The examiner maintains that such a circuit was well known in the art.

Regarding the activation circuit, Thompson discloses a sound activation circuit that activates a playback device upon reception and/or detection of one's voice and releases a verbal response in regards to the input signal (abstract and figures 3-5).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention Yekutiely and Henderson by incorporating an activation circuit for the purpose of activates a playback device upon reception and/or detection of one's voice via a speaker and releases a verbal response and/or output in regards to the input.

Thus, Yeku et al. fails to disclose a write circuit and a read circuit. However, the applicant's admitted prior art teaches a write circuit and a read circuit.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Yeku et al. by incorporating write and read circuits for the purpose of enabling sound device to be able to receive an input and and return a response upon reception of the input signal.

8. Claims 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yekutiely et al. in view of Willy.

Regarding claims 20 and 22, Yekutiely discloses a communication system a communication device, which indicates a functional unit, with a speaker, a bi-directional interface for providing analog audio transmission via input/output port (figures 1 and 2, col. 2, lines 59-67 and abstract). However, Yekutiely fails to specifically disclose an activation circuit and vibration being created by the speaker. The examiner maintains that such components are well known in the art.

However, Yeku et al. fail to specifically disclose, and activation circuit. The examine rmaintains that such a circuit was well known in the art.

Regarding the activation circuit, Thompson discloses a sound activation circuit that activates a playback device upon reception and/or detection of one's voice and releases a verbal response in regards to the input signal (abstract and figures 3-5).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention Yekutieli by incorporating an activation circuit for the purpose of activates a playback device upon reception and/or detection of one's voice via a speaker and releases a verbal response and/or output in regards to the input.

Willy discloses an improved "electromagnetic transducer that can function as either a speaker, a microphone, or a control device". Column 3 lines 3-6. In its application of a control device, tabs 124 (Figs. 19 and 20) provide bearing surfaces for armatures 116 and 118. Movement of these armatures, by touching, for example, produces electrical control responses from the speaker. Column 9 lines 44 though column 10, line 14.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the transducer taught by Willy in the audio device of Yeku et al. because using this transducer would allow a greater degree of flexibility in controlling the device without increasing the number of input/output ports required.

9. Claims 29-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeku et al in view of the applicant's admitted prior art.

Regarding claims 29-31 and 33-36, Yekutieli discloses a communication system a communication device, which indicates a functional unit, with a speaker, a bi-directional interface for providing analog audio transmission via input/output port (figures 1 and 2, col. 2,

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lines 59-67 and abstract). However, Yekutiely fails to specifically the speaker coupled to an integrated circuit, wherein the speaker provides both input an output, and an activation circuit.

The examiner maintains that such components are well known in the art.

Regarding a speaker coupled to an integrated circuit, in a similar field of endeavor, Henderson discloses a dialer programming system and device with integrated printing process. Henderson's disclosure comprises an integrated circuit (digital record/playback circuit, indicative of a functional unit as well) that includes a speaker for sound input and output (col. 15, lines 8-52). As well, Henderson et al. discloses a memory on the integrated circuit which constitutes a memory array (col. 15, lines 42-43).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Yekutiely by incorporating a speaker coupled to an integrated circuit having dual function of providing input and output and thus further being coupled the input and output circuits for adequate performance of the processing system.

However, Yekutiely and Henderson fails to specifically disclose, and activation circuit. The examiner maintains that such a circuit was well known in the art.

Regarding the activation circuit, Thompson discloses a sound activation circuit that activates a playback device upon reception and/or detection of one's voice and releases a verbal response in regards to the input signal (abstract and figures 3-5).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention Yeku etiely and Henderson by incorporating an activation circuit for the purpose of activates a playback device upon reception and/or detection of one's voice via a speaker and releases a verbal response and/or output in regards to the input.

Thus, Yeku et al. fails to disclose a write circuit and a read circuit. However, the applicant's admitted prior art teaches a write circuit and a read circuit.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Yeku et al. by incorporating write and read circuits for the purpose of enabling sound device to be able to receive an input and and return a response upon reception of the input signal.

Regarding claim 32, Monti et al. fails to specifically disclose the memory as FLASH EEPROM memory. The takes official notice of the fact that FLASH EEPROM memory is well known in the art.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Yeku et al. and AAPA by implementing the use of a FLASH EPROM memory for the purpose of enabling reprogramming and stable storage for long periods of time, wherein the use of FLASH EEPROM memory is one of the well known memory techniques in the art of storing information signals (e.g., audio).

Allowable Subject Matter

10. Claims 12 and 28 are allowed.

Response to Arguments

11. Applicant's arguments with respect to claims 4-9, 11, 17-21, 23-27 and 29-36 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argued the prior art reference of Monti failed to teach the claimed invention in respect that Mont's bi-direction pin only providing a digital processing function of a digital signal for a control signal, not processing an audio analog signal for driving a speaker. A new reference, used in the Office Action as set forth above, discloses a bi-directional interface for processing the input and output of analog audio, and further comprises a loudspeaker that is driven by the audio signal.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

LAG

September 23, 2003

MINSUN OH HARVEY
PRIMARY EXAMINER